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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,848	03/15/2005	Xuanming Shi	05505-PCT	1877

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EXAMINER

GODLEWSKI, JAMES A

ART UNIT	PAPER NUMBER
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2609

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/527,848</p>	<p>Applicant(s)</p> <p align="center">SHI, XUANMING</p>	
	<p>Examiner</p> <p align="center">James Godlewski</p>	<p>Art Unit</p> <p align="center">2609</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,11,12 and 15-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,11,12 and 15-23 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____</p> |
|---|---|

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in China on 09/16/2002. It is noted, however, that applicant has not filed a certified copy of the CHINA 02257334.8 application as required by 35 U.S.C. 119(b).

Specification

The disclosure is objected to because of the following informalities: spelling error in title.

Appropriate correction is required.

Claim Objections

Claim 18 is objected to because of the following informalities: Claim 18 recites the limitation "the printed circuit board" in line 3. There is insufficient antecedent basis for this limitation in the claim. Rewriting the claim to be dependent on claim 16 is suggested. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **claim 7**, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1,7,11,12,15,18,22, and 23** are rejected under 35 U.S.C. 102(b) as being anticipated by Nohno et al., US Patent 6,239,788 (hereafter referenced as Nohno).

Regarding **claim 1**, Nohno discloses a coordinate input device and a display-integrated type coordinate input device. The system is illustrated in Figures 1-37. As discussed in column 1 lines 9-11, the system is a display-integrated type coordinate input device. This characterization of the invention reads on "touch control display screen". As taught in column 26 lines 59-65 the described embodiments of the display screen may be, but are not limited to, plasma display panel or LCD. This reads on "comprising at least a display screen". It is inherent that this device comprises a housing. As illustrated in Figure 1, the system contains an array of electrodes S1...SN and G1...GM and their outputs are connected to their respective circuits 32 & 33 functions to detect the position of operator's finger or pen, which is located behind the TFT LCD panel 31. This reads on "the induction layer being provided behind the display screen and connected to the induction collection control circuit by its output" and

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"the said induction layer is a wire lattice winded and interlaced separately by wires along the X and Y axes". As discussed in column 9 lines 42-47, the system contains a panel control circuit 40 that is used to display images on display panel 31 and control other circuits. This reads on "a control circuit of display screen being provided in the housing". As taught in column 4 lines 30-35, the system insulates the grid configuration of electrodes. This reads on "the wires are insulated with each other at the crossing points". As illustrated in Figure 1, the adjacent grouping of electrodes on the X and Y axes bound rectangular regions, which reads on "the space within each lattice unit constitutes one induction cell."

Regarding **claim 7**, as taught in column 4 lines 30-35, the system insulates the grid configuration of electrodes. This reads on "the surface of the wires is wholly covered or coated by an insulated layer".

Regarding **claim 11**, which recites "thermal pressing or thermal melting process" the apparatus of Nohno meets the limitations of the product, therefore rejects the claim.

Regarding **claim 12**, as taught in column 2 lines 53-57 the system contains electrodes X and Y formed of an ITO (Indium Tin Oxide) film. This characterization of the invention reads on "insulated membrane is film material".

Regarding **claim 15**, as taught in column 3 lines 47-57 the system contains signal detection circuits that are directly connected to the other electrodes. This reads on "the induction control circuit and the induction layer are integrated by direct connection". As for "the components of the induction control circuit are directly positioned on the output of the wire lattice" this is illustrated in Figure 1. As for "the

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induction control circuit is positioned in the housing.”, it is inherent the circuitry is in the housing.

Regarding **claim 18**, as taught in column 1 lines 18-25 the system is described as a display-integrated type tablet device. This reads on “the printed circuit board is the printed circuit board of display screen control circuit inside the body of the display screen.” It is inherent the circuitry is in the housing.

Regarding **claim 22**, as taught in column 3 lines 14-21 the system contains a protection panel for protecting the surface of the display device. This reads on “a protective layer is provided on the front surface of the display screen.”

Regarding **claim 23**, as taught in column 26 lines 59-65 the described embodiments of the display screen may be, but are not limited to, plasma display panel or LCD. This reads on “the said display screen is plasma panel or LCD.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claim 4, 5, 6, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohno in view of Teterwak, US Patent 5,841,427 (hereafter referenced as Teterwak).

Regarding **claim 4**, Nohno does not disclose “a shield layer is provided behind the induction layer in order to enhance the anti-interference ability of the device.”

In the related art of touch panel systems, Teterwak discloses a shield layer in column 3 lines 24-33 which functions to reduce the noise coupling. This reads on “shield layer is provided behind the induction layer in order to enhance the anti-interference ability of the device.” It would have been obvious to one of ordinary skill in the art at the time of invention to modify the apparatus of Nohno by Teterwak to include a shield layer for the purpose of reducing noise and electromagnetic interference.

Regarding **claim 5**, Nohno does not disclose, “a buffering layer is provided between the induction layer and the shielding layer.”

In the related art of touch panel systems, Teterwak discloses a polyester spall shield 28 (Figure 2) that maintains a space between the active ITO layer (induction layer) and the shield layer. This reads on “a buffering layer is provided between the induction layer and the shielding layer.” It would have been obvious to one of ordinary skill in the art at the time of invention to modify the apparatus of Nohno by Teterwak to include a buffer layer for the purpose of maintaining a space between specific layers and providing structural reinforcement to prevent the glass surface from shattering if ever broken.

Regarding **claim 6**, Nohno does not disclose, “a spatial gap is kept between the shield layer and the control circuit of display screen.”

In the related art of touch panel systems, Teterwak discloses an air gap 30 (Figure 2) in column 3 lines 33-35 that functions to separate the lower surface of the

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spall shield (shield layer) from an upper surface of the LCD. This reads on "a spatial gap is kept between the shield layer and the control circuit of display screen." It would have been obvious to one of ordinary skill in the art at the time of invention to modify the apparatus of Nohno by Teterwak to include an air gap to separate the shield layer from the LCD and its control circuitry for the purposes of electrical isolation and to further increase the electromagnetic shielding effect.

Regarding **claim 17**, Nohno does not disclose, "the said output of the wire lattice of the induction layer is positioned between a hard sheet and the printed circuit board; a buffering layer is positioned between the hard sheet and the output of the wire lattice; the hard sheet, the buffering layer and the output of the wire lattice are overlaid on the printed circuit board by means of the screwing and pressing connection; and the output of the wire lattice is connected to the corresponding input terminal on the printed circuit board."

In the related art of touch panel systems, Teterwak discloses in column 3 lines 11-36 the sensor panel may include several layers of material as shown in Figure 2. This reads on "the said output of the wire lattice of the induction layer is positioned between a hard sheet and the printed circuit board; a buffering layer is positioned between the hard sheet and the output of the wire lattice; the hard sheet, the buffering layer and the output of the wire lattice are overlaid on the printed circuit board by means of the screwing and pressing connection;" and as for "and the output of the wire lattice is connected to the corresponding input terminal on the printed circuit board.", this connection is inherent. It would have been obvious to one of ordinary skill in the art at

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the time of invention to modify the apparatus of Nohno by Teterwak to include an assembly structure of the disclosed layers for the purposes of, but not limited to, general device operation, electromagnetic shielding, physical structural reinforcement, and reduction of circuit design complexities.

3. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Nohno as in view of Gettemy et al. US Patent 6,965,375 (hereafter referenced as Gettemy).

Regarding **claim 16**, Nohno does not disclose "by means of pressure-connection, plug-in connection or welding connection".

As illustrated in Nohno (Figure 1) the components, first electrode drive circuit 32 and second electrode drive circuit 33, of the coordinate input device are separate from the coordinate input device (induction layer). This reads on "the said components of the induction control circuit are mounted on a printed circuit board that is separated from the induction layer". As for "the output of the wire lattice of the induction layer is connected to the corresponding input terminal on the printed circuit board", this is inherent.

In the related art of touch panel systems, Gettemy discloses in column 5 lines 14-26 there are many ways for establishing contact to a circuit element for example soldering, epoxy bonding, or welding. This reads on "by means of pressure-connection, plug-in connection or welding connection". Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Nohno by Gettemy to include any of several known electrical connection means including, but not limited to, pressure-connection, plug-in connection or welding-connection for the purpose of establishing electrical contact.

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4. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Nohno in view of Cees Van Berkel, US Patent Application Publication 2002/0190964 A1 (hereafter referenced as Cees Van Berkel).

Regarding **claim 19**, Nohno does not disclose "printed circuit board of display screen control circuit positioned outside the body of the display screen".

In the related art of touch panel systems, Cees Van Berkel discloses other circuitry may be located external to the integrated display in page 2 paragraph 0015. This reads on "printed circuit board of display screen control circuit positioned outside the body of the display screen". It would have been obvious to one of ordinary skill in the art at the time of invention to modify the apparatus of Nohno by Cees Van Berkel to include locating various other circuitry external to the integrated display for the purpose of less bulky device or less complex circuit design.

5. **Claim 20 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohno in view of Cees Van Berkel and further in view of Gettemy et al. US Patent 6,965,375.

Regarding **claim 20**, the combination of Nohno and Cees Van Berkel discloses a coordinate input device and a display-integrated type coordinate input device wherein various circuitry may be positioned outside the body of the display screen.

The combination of Nohno and Cees Van Berkel does not disclose "the output of the wire lattice of the induction layer is connected with the output interface of the induction layer by means of pressure-connection, plug-in connection or welding-

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connection; and an interface matching the electrical connection means of the induction layer is provided on the control circuit.”

In the related art of touch panel systems, Gettemy discloses in column 5 lines 14-26 there are many ways for establishing contact to a circuit element for example soldering, epoxy bonding, or welding. This reads on “the output of the wire lattice of the induction layer is connected with the output interface of the induction layer by means of pressure-connection, plug-in connection or welding-connection.” Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Nohno and Cees Van Berkel by Gettemy to include any of several known electrical connection means including, but not limited to, pressure-connection, plug-in connection or welding-connection. As for “an interface matching the electrical connection means of the induction layer is provided on the control circuit.” This matching interface is inherent to establish electrical means of connection.

Regarding **claim 21**, the combination of Nohno and Cees Van Berkel discloses a coordinate input device and a display-integrated type coordinate input device wherein various circuitry may be positioned outside the body of the display screen. The combination of Nohno and Cees Van Berkel does not disclose “the output interface of the induction layer and the interface of the control circuit are one of the following connection types: pin-type connection means, flexible printed circuit means, PIN-PIN connection means, welding spot (VGA) thermal-melted connection means, ultrasonic welding device, solder-plate welding devices, or puncture-type connection means.”

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In the related art of touch panel systems, Gettemy discloses in column 3 lines 48-57 means of establishing electrical contact by flex circuit tail 13 (Figure 1). This reads on "the output interface of the induction layer and the interface of the control circuit are one of the following connection types: pin-type connection means, flexible printed circuit means, PIN-PIN connection means, welding spot (VGA) thermal-melted connection means, ultrasonic welding device, solder-plate welding devices, or puncture-type connection means." Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Nohno and Cees Van Berkel by Gettemy to include the specified electrical connection means as well as any conventional means known in the art for purposes of electrical connection means.

Conclusion

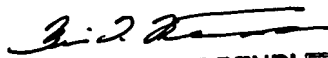
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Godlewski whose telephone number is 571-270-3256. The examiner can normally be reached on Monday-Friday, 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JG


BRIAN TYRONE PENDLETON
PRIMARY EXAMINER